

WHAT IS CLAIMED IS:

1. A polarized electrode for a laminated type electric double-layer condenser, comprising:

a band-shaped electrode member including an electrode:
5 prepared by dispersing an active substance including mainly active carbon and a conductive filler through a binder and by forming them into a sheet shape; and adhered to at least one face of a collecting foil having a conductivity, and

a separator having a shape corresponding to that of the
10 electrode member are alternately laminated and spirally wound up, wherein

the end portion of the electrode is spaced, at the two axial end portions of the laminated type polarized electrode, at a distance of 0.1 % or more of the width of the electrode
15 member from the end portion of the electrode member.

2. The polarized electrode for a laminated type electric double-layer condenser according to Claim 1, wherein

the end portion of the electrode is spaced, at the two
20 axial end portions of the laminated type polarized electrode, at a distance of 0.1 % to 10 % of the width of the electrode member from the end portion of the electrode member.

3. A polarized electrode for a laminated type electric double-layer condenser, comprising:

a band-shaped electrode member including an electrode: prepared by dispersing an active substance including mainly
5 active carbon and a conductive filler through a binder and by forming them into a sheet shape; adhered to at least one face of a collecting foil having a conductivity; and cut to a desired size, and

a separator having a shape corresponding to that of the
10 electrode member are alternately laminated into a laminate, wherein

the end portion of the electrode is spaced, at the two axial end portions of the laminated type polarized electrode, at a distance of 0.1 % or more of the width of the electrode
15 member from the end portion of the electrode member.

4. The polarized electrode for a laminated type electric double-layer condenser according to Claim 3, wherein

the end portion of the electrode is spaced, at the two
20 end portions of the laminated type polarized electrode, at a distance of 0.1 % to 10 % of the width of the electrode member from the end portion of the electrode member.

5. The electric double-layer condenser comprising a polarized electrode for an electric double-layer condenser according to any of Claim 1 to Claim 4.

5 6. A polarized electrode for an electric double-layer condenser, comprising:

a collecting foil having a conductivity, and

an electrode prepared by dispersing an active substance including mainly active carbon and a conductive filler through
10 a binder and by forming them into a sheet shape is adhered through an adhesive layer to at least one face of the collecting foil, wherein

the collecting foil has an etched portion subjected to an etching treatment, at the portion, to which the electrode
15 is adhered, and in a vicinity thereof, wherein

the etched portion is formed to have a width larger than that of the electrode and smaller than that of the adhesive layer, and wherein

the adhesive layer has a width set larger by about 0.3
20 to 10 % than that of the electrode member.

7. The polarized electrode for an electric double-layer condenser according to Claim 6, wherein

the adhesive layer is formed thicker at two ends and the
25 peripheries thereof than at the remaining portions.

8. The process for manufacturing an polarized electrode for an electric double-layer condenser according to Claim 6, comprising the steps of:

5 preparing an intimate mixture by kneading an active substance including mainly active carbon, a conductive filler and a binder;

preparing granules by pulverizing the intimate mixture;

10 preparing a sheet-shaped electrode by shaping the granules;

applying an adhesive to the etched portion, to which the electrode is to be adhered, of the collecting foil; and

15 manufacturing a polarized electrode by adhering the electrode to at least one face of the collecting foil through the adhesive applied at the adhesive applying step, wherein

the adhesive applying step applies the adhesive so that the two ends and peripheries thereof may be thicker than the remaining portions.

20 9. The process for manufacturing a polarized electrode for an electric double-layer condenser, according to Claim 8, wherein

the adhesive applying step is done by using a mesh roll on the applying face of a roll, wherein

25 the mesh roll is formed such that the mesh size of the

two widthwise ends and peripheries thereof is larger than that of the remaining portions, and wherein

as the collecting foil passes the mesh roll, the adhesive is so applied that the adhesive layer at the two widthwise ends of the etched portion of the collecting foil and the peripheries thereof is thicker than at the remaining portions.

10. The process for manufacturing a polarized electrode for an electric double-layer condenser, according to Claim 8, wherein

the adhesive applying step is done by using a gravure roll, wherein

the gravure roll is so formed that the gravure roll has adhesive-filled grooves to be filled with the adhesive in the roll face to be contacted by the collecting foil, and that the adhesive-filled grooves are deeper at the two widthwise ends of the roll face and the peripheries thereof than at the remaining portions, and wherein

as the collecting foil passes the gravure roll, the adhesive is so applied that the adhesive layer at the two widthwise ends of the etched portion of the collecting foil and the peripheries thereof is thicker than at the remaining portions.

11. The electric double-layer condenser manufactured by using a polarized electrode for an electric double-layer condenser according to Claim 6.

5 12. A process for manufacturing an electrode sheet for an electric double-layer condenser, comprising:

a laminating step of manufacturing long sheet-shaped electrodes having a predetermined thickness of a shaping material containing carbon powder, a conductive assistant and
10 a binder, and then adhering the sheet-shaped electrodes to the surfaces of a long conductive foil through a conductive adhesive, wherein

the laminating step is performed by adhering the sheet-shaped electrodes while applying the conductive adhesive
15 with a thickness of 10 microns or less to the surfaces of the conductive foil by using a gravure coater.

13. The process for manufacturing an electrode sheet for an electric double-layer condenser according to Claim 12, wherein

20 at the laminating step, the surface state of the conductive foil having the conductive adhesive applied thereto is continuously monitored by an image pickup device.

14. A laminating apparatus for manufacturing an electrode sheet for an electric double-layer condenser by adhering sheet-shaped electrodes, as formed of a shaping material containing carbon powder, a conductive assistant and a binder
5 into a long sheet shape of a predetermined thickness, to the surfaces of a long conductive foil through a conductive adhesive, comprising:

a gravure coater, and
adhesive applying section for applying the conductive
10 adhesive with a thickness of 10 microns or less to the surfaces of the conductive foil by using the gravure coater.

15. The laminating apparatus according to Claim 14, further comprising:
15 monitor section for continuously monitoring the surface state of the conductive foil having the conductive adhesive applied thereto, by an image pickup device.